

RRRRRRRRRRRR		UUU		UUU	NNN	NNN	000000000		FFFFFFFFFFFFFF	FFFFFFFFFFFFFF
RRRRRRRRRRRR		UUU		UUU	NNN	NNN	000000000		FFFFFFFFFFFFFF	FFFFFFFFFFFFFF
RRRRRRRRRRRR		UUU		UUU	NNN	NNN	000000000		FFFFFFFFFFFFFF	FFFFFFFFFFFFFF
RRR	RRR	UUU		UUU	NNN	NNN	000	000	FFF	FFF
RRR	RRR	UUU		UUU	NNN	NNN	000	000	FFF	FFF
RRR	RRR	UUU		UUU	NNN	NNN	000	000	FFF	FFF
RRR	RRR	UUU		UUU	NNNNNN	NNN	000	000	FFF	FFF
RRR	RRR	UUU		UUU	NNNNNN	NNN	000	000	FFF	FFF
RRR	RRR	UUU		UUU	NNNNNN	NNN	000	000	FFF	FFF
RRRRRRRRRRRR		UUU		UUU	NNN	NNN	000	000	FFFFFFFFFFFFFF	FFFFFFFFFFFFFF
RRRRRRRRRRRR		UUU		UUU	NNN	NNN	000	000	FFFFFFFFFFFFFF	FFFFFFFFFFFFFF
RRRRRRRRRRRR		UUU		UUU	NNN	NNN	000	000	FFFFFFFFFFFFFF	FFFFFFFFFFFFFF
RRR	RRR	UUU		UUU	NNN	NNNNNN	000	000	FFF	FFF
RRR	RRR	UUU		UUU	NNN	NNNNNN	000	000	FFF	FFF
RRR	RRR	UUU		UUU	NNN	NNNNNN	000	000	FFF	FFF
RRR	RRR	UUU		UUU	NNN	NNN	000	000	FFF	FFF
RRR	RRR	UUU		UUU	NNN	NNN	000	000	FFF	FFF
RRR	RRR	UUU		UUU	NNN	NNN	000	000	FFF	FFF
RRR	RRR	UUU		UUU	NNN	NNN	000	000	FFF	FFF
RRR	RRR	UUUUUUUUUUUUUUUU		UUUUUUUUUUUUUUUU	NNN	NNN	000000000		FFF	FFF
RRR	RRR	UUUUUUUUUUUUUUUU		UUUUUUUUUUUUUUUU	NNN	NNN	000000000		FFF	FFF
RRR	RRR	UUUUUUUUUUUUUUUU		UUUUUUUUUUUUUUUU	NNN	NNN	000000000		FFF	FFF

**CE
VO**

.....

```

CCCCCCCC  AAAAAA  RRRRRRRR  AAAAAA  GGGGGGGG  EEEEEEEEE
CCCCCCCC  AAAAAA  RRRRRRRR  AAAAAA  GGGGGGGG  EEEEEEEEE
CC        AA      AA  RR      RR  AA      AA  GG      GG  EE
CC        AA      AA  RR      RR  AA      AA  GG      GG  EE
CC        AA      AA  RR      RR  AA      AA  GG      GG  EE
CC        AA      AA  RR      RR  AA      AA  GG      GG  EE
CC        AA      AA  RRRRRRRR  AA      AA  GG      GG  EEEEEEE
CC        AA      AA  RRRRRRRR  AA      AA  GG      GG  EEEEEEE
CC        AAAAAAAAAA  RR  RR  AAAAAAAAAA  GG  GGGGGG  EE
CC        AAAAAAAAAA  RR  RR  AAAAAAAAAA  GG  GGGGGG  EE
CC        AA      AA  RR      RR  AA      AA  GG      GG  EE
CC        AA      AA  RR      RR  AA      AA  GG      GG  EE
CC        AA      AA  RR      RR  AA      AA  GG      GG  EE
CCCCCCCC  AA      AA  RR      RR  AA      AA  GGGGGG  EEEEEEEEE
CCCCCCCC  AA      AA  RR      RR  AA      AA  GGGGGG  EEEEEEEEE

```

```

LL          IIIIII          SSSSSSSS
LL          IIIIII          SSSSSSSS
LL          II             SS
LL          II             SS
LL          II             SS
LL          II             SS
LL          II             SSSSSS
LL          II             SSSSSS
LL          II             SS
LL          II             SS
LL          II             SS
LL          II             SS
LLLLLLLLLLLL IIIIII          SSSSSSSS
LLLLLLLLLLLL IIIIII          SSSSSSSS

```



```
1 0001 0 MODULE CARAGE ( IDENT = 'V04-000'
2 P 0002 0 %BLISS32C, ADDRESSING_MODE (EXTERNAL = LONG_RELATIVE,
3 0003 0 NONEXTERNAL = LONG_RELATIVE)
4 0004 0 ) =
5 0005 1 BEGIN
6 0006 1
7 0007 1 *****
8 0008 1 *
9 0009 1 * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY *
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26 0026 1 *
27 0027 1 *
28 0028 1 *****
29 0029 1
30 0030 1
31 0031 1 ++
32 0032 1 FACILITY: DSR (Digital Standard RUNOFF) / DSRPLUS
33 0033 1
34 0034 1 ABSTRACT:
35 0035 1
36 0036 1 Processes the .PAGE, .SKIP, .BLANK, .TEST PAGE,
37 0037 1 .BREAK, and .SPACING commands.
38 0038 1
39 0039 1 ENVIRONMENT: Transportable
40 0040 1
41 0041 1 AUTHOR: R.W.Friday CREATION DATE: May, 1978
42 0042 1
```

CARAGE
V04-000

Revision History

F 13
15-Sep-1984 23:55:25
14-Sep-1984 13:05:38

VAX-11 Bliss-32 V4.0-742
[RUNOFF.SRC]CARAGE.BLI;1

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(2)

:	44	0043	1	%SBTTL 'Revision History'
:	45	0044	1	MODIFIED BY:
:	46	0045	1	
:	47	0046	1	006 KFA00006 Ken Alden 05-Aug-1983
:	48	0047	1	Added handling for .PAGE NOW (plus).
:	49	0048	1	
:	50	0049	1	005 RER00005 Ron Randall 17-Mar-1983
:	51	0050	1	For DSRPLUS:
:	52	0051	1	In [h_skip], added code to test for negative skip in topnote.
:	53	0052	1	
:	54	0053	1	004 KFA00004 Ken Alden 07-Mar-1983
:	55	0054	1	Global edit of all modules. Updated module names, idents,
:	56	0055	1	copyright dates. Changed require files to BLISS library.
:	57	0056	1	--
:	58	0057	1	

Module Level Declarations

```

: 60      0058 1 %SBTTL 'Module Level Declarations'
: 61      0059 1
: 62      0060 1 INCLUDE FILES:
: 63      0061 1
: 64      0062 1 LIBRARY 'NXPORT:XPORT';      ! XPORT Library
: 65      0063 1 REQUIRE 'REQ:RNODEF';      ! RUNOFF variant definitions
: 66      0194 1
: 67      U 0195 1 %IF DSRPLUS %THEN
: 68      U 0196 1 LIBRARY 'REQ:DPLLIB';      ! DSRPLUS BLISS Library
: 69      0197 1 %ELSE
: 70      0198 1 LIBRARY 'REQ:DSRLIB';      ! DSR BLISS Library
: 71      0199 1 %FI
: 72      0200 1
: 73      0201 1
: 74      0202 1 EXTERNAL REFERENCES:
: 75      0203 1
: 76      0204 1 EXTERNAL
: 77      0205 1 FNCT      : FNCT_DEFINITION,
: 78      0206 1 IRA      : FIXED_STRING,
: 79      0207 1 MRA      : REF_FIXED_STRING,
: 80      0208 1 NUMPRM   : NUMPRM_DEFINE,
: 81      0209 1 PHAN     : PHAN_DEFINITION,
: 82      0210 1 SCA      : SCA_DEFINITION;
: 83      0211 1
: 84      U 0212 1 %IF DSRPLUS %THEN
: 85      U 0213 1 EXTERNAL
: 86      U 0214 1 TOPNOT   : TN_DEFINITION;
: 87      U 0215 1
: 88      U 0216 1 EXTERNAL LITERAL
: 89      U 0217 1 RNFIIT;
: 90      0218 1 %FI
: 91      0219 1
: 92      0220 1 EXTERNAL LITERAL
: 93      0221 1 RNFIFT,
: 94      0222 1 RNFINM,
: 95      0223 1 RNFMNL;
: 96      0224 1
: 97      0225 1 EXTERNAL ROUTINE
: 98      0226 1 erma,
: 99      0227 1 gcpage,
100      0228 1 gcpos,
101      0229 1 gcskip,
102      0230 1 gtpc,
103      U 0231 1 %IF DSRPLUS %THEN
104      U 0232 1 newpag,
105      0233 1 %FI
106      0234 1 tpffit,
107      0235 1 tpfsiz;
: 108     0236 1
```

```
110 0237 1 GLOBAL ROUTINE carage (handler_code) : NOVALUE =
111 0238 1
112 0239 1 ++
113 0240 1 FUNCTIONAL DESCRIPTION:
114 0241 1
115 0242 1     See the ABSTRACT, above.
116 0243 1
117 0244 1 FORMAL PARAMETERS:
118 0245 1
119 0246 1     handler_code - Indicates which command is to be processed.
120 0247 1
121 0248 1 IMPLICIT INPUTS:
122 0249 1
123 0250 1     numprm - Expected to contain a number, as processed by GETNUM.
124 0251 1
125 0252 1 IMPLICIT OUTPUTS:      None
126 0253 1
127 0254 1 ROUTINE VALUE:
128 0255 1 COMPLETION CODES:      None
129 0256 1
130 0257 1 SIDE EFFECTS:          None
131 0258 1 --
132 0259 1
133 0260 2 BEGIN
134 0261 2
135 0262 2 ! Some commands take a number.
136 0263 2 IF (.HANDLER_CODE NEQ H_BREAK) AND
137 0264 2     (.HANDLER_CODE NEQ H_PAGE)
138 0265 2 %IF DSRPLUS %THEN
139 0266 2     AND
140 0267 2     (.HANDLER_CODE NEQ H_PAGE_NOW)
141 0268 2 %FI
142 0269 2 THEN
143 0270 2
144 0271 2 IF NOT .NUM_RESULT
145 0272 2 ! Ignore command if number was bad.
146 0273 2 THEN
147 0274 2 RETURN;
148 0275 2
149 0276 2 SELECTONE .HANDLER_CODE OF
150 0277 2 SET
151 0278 2
152 0279 2 [H_BLANK, H_SKIP] :
153 0280 2 BEGIN
154 0281 2
155 0282 2 IF .NUM_LENGTH EQL 0
156 0283 2 THEN
157 0284 2     NUM_VALUE = 1;                ! Default if no parameter.
158 0285 2
159 0286 2 IF .HANDLER_CODE EQL H_SKIP
160 0287 2 ! Commands .SKIP and .BLANK mean the same
161 0288 2 ! thing, except that .SKIP means ".SPACING"
162 0289 2 ! blank lines, whereas .BLANK means exactly
163 0290 2 ! as many blank lines as specified.
164 0291 2 THEN
165 0292 2     NUM_VALUE = .NUM_VALUE * .SCA_SPACING;
166 0293 2
```



```
167      0294 3      IF .NUM_VALUE LSS 0
168      0295 3      THEN
169      0296 4      BEGIN
170      0297 4
171      U 0298 4      %IF DSRPLUS %THEN
172      U 0299 4
173      U 0300 4      .SKIP with negative value is illegal in a topnote.
174      U 0301 4
175      U 0302 4      IF .TN_COLLECTING
176      U 0303 4      THEN
177      U 0304 4      BEGIN
178      U 0305 4      ERMA (RNFIIT, FALSE);
179      U 0306 4      RETURN;
180      U 0307 4      END;
181      U 0308 4      %FI
182      U 0309 4
183      U 0310 4      .SKIP with negative value is illegal in a footnote.
184      U 0311 4
185      U 0312 4      IF .FNCT_COLLECTING
186      U 0313 4      THEN
187      U 0314 4      BEGIN
188      U 0315 5      ERMA (RNFIIT, FALSE);
189      U 0316 5      RETURN;
190      U 0317 5      END;
191      U 0318 4
192      U 0319 4      IF ABS (.NUM_VALUE) GEQ .PHAN_LLLINES
193      U 0320 4      THEN
194      U 0321 4      ! User said something like .SKIP -9999.
195      U 0322 4      BEGIN
196      U 0323 5      ERMA (RNFINM, FALSE);
197      U 0324 5      RETURN;
198      U 0325 5      END;
199      U 0326 4
200      U 0327 4      ! It's a valid .SKIP/.BLANK with a negative count.
201      U 0328 4      GCPOS (.NUM_VALUE);
202      U 0329 4      RETURN;
203      U 0330 4      END;
204      U 0331 4
205      U 0332 4      ! Generate code for the conditional skip.
206      U 0333 4      GCSKIP (.NUM_VALUE);
207      U 0334 4      END;
208      U 0335 2
209      U 0336 2
210      U 0337 2      [H_BREAK] :
211      U 0338 2      ! Everything associated with .BREAK is contained in
212      U 0339 2      ! the tables, that are interpreted by DOCM.
213      U 0340 2      0;
214      U 0341 2
215      U 0342 2      [H_PAGE] :
216      U 0343 2      ! Generate code for the conditional page.
217      U 0344 2      GCPAGE ();
218      U 0345 2
219      U 0346 2      %IF DSRPLUS %THEN
220      U 0347 2      [H_PAGE_NOW] :
221      U 0348 2      ! Throw away page NOW.
222      U 0349 2      BEGIN
223      U 0350 2      IF .fnct_collecting      ! Don't start a new page if
```

```
.. 224      U 0351      2      THEN
.. 225      U 0352      2      RETURN;
.. 226      U 0353      2
.. 227      U 0354      2
.. 228      U 0355      2      phan_top_page = false;
.. 229      U 0356      2      newpag (J);
.. 230      U 0357      2      END;
.. 231      U 0358      2      %FI
.. 232      U 0359      2
.. 233      U 0360      2      [H_SPACING] :
.. 234      U 0361      2      BEGIN
.. 235      U 0362      2
.. 236      U 0363      2      IF .NUM_LENGTH EQL 0
.. 237      U 0364      2      ! No number provided.
.. 238      U 0365      2      THEN
.. 239      U 0366      2      BEGIN
.. 240      U 0367      2      ERMA (RNFMNL, FALSE);
.. 241      U 0368      2      RETURN;
.. 242      U 0369      2      END;
.. 243      U 0370      2
.. 244      U 0371      2      IF (.NUM_VALUE LEQ 0) OR
.. 245      U 0372      2      (.NUM_VALUE GTR 5)
.. 246      U 0373      2      ! Number not between 0 and 5.
.. 247      U 0374      2      THEN
.. 248      U 0375      2      BEGIN
.. 249      U 0376      2      ERMA (RNFINM, FALSE);
.. 250      U 0377      2      RETURN;
.. 251      U 0378      2      END;
.. 252      U 0379      2
.. 253      U 0380      2      SCA_SPACING = .NUM_VALUE;
.. 254      U 0381      2      END;
.. 255      U 0382      2
.. 256      U 0383      2      [H_TEST_PAGE] :
.. 257      U 0384      2      BEGIN
.. 258      U 0385      2
.. 259      U 0386      2      IF .NUM_LENGTH EQL 0
.. 260      U 0387      2      ! No number provided.
.. 261      U 0388      2      THEN
.. 262      U 0389      2      BEGIN
.. 263      U 0390      2      ERMA (RNFMNL, FALSE);
.. 264      U 0391      2      RETURN;
.. 265      U 0392      2      END;
.. 266      U 0393      2
.. 267      U 0394      2      IF .NUM_VALUE LEQ 0
.. 268      U 0395      2      ! Negative number not allowed.
.. 269      U 0396      2      THEN
.. 270      U 0397      2      BEGIN
.. 271      U 0398      2      ERMA (RNFINM, FALSE);
.. 272      U 0399      2      RETURN;
.. 273      U 0400      2      END;
.. 274      U 0401      2
.. 275      U 0402      2      ! Add count of pending footnote lines, if any,
.. 276      U 0403      2      ! to the given test-page value.
.. 277      U 0404      2      ! Generate code for a test page.
.. 278      U 0405      2      GTPC (.NUM_VALUE + TPFSIZ (TPFFIT ()));
.. 279      U 0406      2      END;
.. 280      U 0407      2
```


CARAGE
V04-000

Module Level Declarations

: 281
: 282
: 283

0408 2 TES;
0409 2
0410 1 END;

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[RUNOFF.SRC]CARAGE.BLI;1

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!End of CARAGE

					.TITLE	CARAGE	
					.IDENT	\V04-000\	
					.EXTRN	FNCT, IRA, MRA, NUMPRM	
					.EXTRN	PHAN, SCA, RNFIFT	
					.EXTRN	RNFIM, RNFIML, ERMA	
					.EXTRN	GCPAGE, GCPOS, GCSKIP	
					.EXTRN	GTPC, TPFFIT, TPFSIZ	
					.PSECT	\$CODE\$,NOWRT,2	
					.ENTRY	CARAGE, Save R2,R3	: 0237
					MOVAB	NUMPRM+4, R3	
					MOVL	HANDLER_CODE, R2	: 0263
					CMPL	R2, #11	
					BEQL	1\$	
000000A7	8F				CMPL	R2, #167	: 0264
					BEQL	1\$	
	01	FC			BLBS	NUMPRM, 1\$	: 0271
					RET		
	0A				CMPL	R2, #10	: 0279
					BEQL	2\$	
000000BC	8F				CMPL	R2, #188	
					BNEQ	8\$	
		08			TSTL	NUMPRM+12	: 0282
					BNEQ	3\$	
	63				MOVL	#1, NUMPRM+4	: 0284
000000BC	8F				CMPL	R2, #188	: 0286
					BNEQ	4\$	
	63	00000000G			MULL2	@SCA+124, NUMPRM+4	: 0292
					TSTL	NUMPRM+4	: 0294
					BGEQ	7\$	
	0A	00000000G			BLBC	FNCT+20, 5\$	: 0313
					CLRL	-(SP)	: 0316
		00000000G			PUSHL	#RNFIFT	
					BRB	14\$	
	50				MOVL	NUMPRM+4, R0	: 0320
					BGEQ	6\$	
	50				MNEGL	R0, R0	
00000000C	FF				CMPL	R0, @PHAN+4	
					BGEQ	13\$	
					PUSHL	NUMPRM+4	: 0329
00000000G	EF				CALLS	#1, GCPOS	
					RET		: 0296
					PUSHL	NUMPRM+4	: 0334
00000000G	EF				CALLS	#1, GCSKIP	
					RET		: 0276
	0B				CMPL	R2, #11	: 0337
					BEQL	16\$	
000000A7	8F				CMPL	R2, #167	: 0342
					BNEQ	9\$	
00000000G	EF				CALLS	#0, GCPAGE	: 0344

000000BD	8F	52	04 00095	RET			
		21	D1 00096	9\$: CMPL	R2, #189		0360
	08	A3	12 0009D	BNEQ	12\$		
		0A	D5 0009F	TSTL	NUMPRM+12		0363
		7E	12 000A2	BNEQ	11\$		
	00000000G	8F	D4 000A4	10\$: CLRL	-(SP)		0367
		2C	DD 000A6	PUSHL	#RNF MNL		
50		63	11 000AC	BRB	14\$		
		1F	D0 000AE	11\$: MOVL	NUMPRM+4, R0		0371
05		50	15 000B1	BLEQ	13\$		
		1A	D1 000B3	CMPL	R0, #5		0372
00000000G	FF	63	14 000B6	BGTR	13\$		
		04	D0 000B8	MOVL	NUMPRM+4, @SCA+124		0380
000000CB	8F	52	04 000BF	RET			0276
		34	D1 000C0	12\$: CMPL	R2, #203		0383
	08	A3	12 000C7	BNEQ	16\$		
		D6	D5 000C9	TSTL	NUMPRM+12		0386
		63	13 000CC	BEQL	10\$		
		10	D5 000CE	TSTL	NUMPRM+4		0394
		7E	14 000D0	BGTR	15\$		
	00000000G	8F	D4 000D2	13\$: CLRL	-(SP)		0398
00000000G	EF	02	DD 000D4	PUSHL	#RNF INM		
		04	FB 000DA	14\$: CALLS	#2, ERMA		
00000000G	EF	00	04 000E1	RET			0397
		50	FB 000E2	15\$: CALLS	#0, TPFFIT		0405
00000000G	EF	01	DD 000E9	PUSHL	R0		
		01	FB 000EB	CALLS	#1, TPFSIZ		
00000000G	EF	00 B340	9F 000F2	PUSHAB	@NUMPRM+4[R0]		
		01	FB 000F6	CALLS	#1, GTPC		
		04	000FD	16\$: RET			0410

; Routine Size: 254 bytes, Routine Base: \$CODE\$ + 0000

: 284 0411 1
: 285 0412 1 END
: 286 0413 0 ELUDOM

!End of module

PSECT SUMMARY

Name	Bytes	Attributes
\$CODE\$	254	NOVEC,NOWRT, RD, EXE,NOSHR, LCL, REL, CON,NOPIC,ALIGN(2)

Library Statistics

File	----- Symbols -----		Pages Mapped	Processing Time
	Total	Loaded Percent		

CARAGE
V04-000

Module Level Declarations

M 13
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VAX-11 Bliss-32 V4.0-742
[RUNOFF.SRC]CARAGE.BLI;1

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:	\$255\$DUA28:[SYSLIB]XPORT.L32;1	590	0	0	252	00:00.1
:	\$255\$DUA28:[RUNOFF.SRC]DSRLIB.L32;1	1248	20	1	86	00:00.2

COMMAND QUALIFIERS

: BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LISS:CARAGE/OBJ=OBJ\$:CARAGE MSRC\$:CARAGE/UPDATE=(ENH\$:CARAGE)

: Size: 254 code + 0 data bytes
: Run Time: 00:06.0
: Elapsed Time: 00:16.5
: Lines/CPU Min: 4123
: Lexemes/CPU-Min: 13617
: Memory Used: 73 pages
: Compilation Complete

0337 AH-BT13A-SE
VAX/VMS V4.0

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